[10191/3791]

UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	Harald Gaukel et al.	Examiner: Hau Van Phan
For:	DEVICE FOR TRIGGERING MEANS IN A VEHICLE	
Filed:	April 22, 2005	Art Unit: 3618
Serial No.:	10/532,414	

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APPEAL BRIEF TRANSMITTAL

SIR:

Accompanying this Appeal Brief Transmittal is an Appeal Brief pursuant to 37 C.F.R. § 41.37 **in triplicate** as a courtesy (even though not required) for filing in the above-identified patent application. Since the Notice of Appeal was filed in the Office on January 17, 2007, the two-month appeal brief date is March 19, 2007 (since March 17, 2007 was a Saturday).

Please charge the appropriate fee of **$500.00**, which includes the Appeal Brief fee under 37 C.F.R. § 1.17(c) (which is believed to be $500.00), to Deposit Account No. **11-0600**. The Commissioner is also authorized, as necessary and/or appropriate, to charge any additional and appropriate fees, *including any Rule 136(a) extension fees*, or credit any overpayment to Deposit Account No. **11-0600**. Two duplicate copies of this transmittal are enclosed for these purposes.

Respectfully submitted,

Dated: 3/19/2007

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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

In the above-identified patent application ("the present application"), Appellants mailed a Notice Of Appeal on January 10, 2007 and it was filed in the U.S.P.T.O on January 17, 2007, from the Final Office Action issued by the U.S. Patent and Trademark Office on September 11, 2006, so that the two-month appeal brief due date is March 19, 2007 (since March 17, 2007 was a Saturday).

In the Final Office Action, claims 9 to 18 were finally rejected.

A Response After A Final Office Action was mailed on September 11, 2006, and an Advisory Action was mailed on December 7, 2006.

It is understood for purposes of the appeal that any Amendments to date have already been entered by the Examiner, and that the Response After Final does not require entry since it included no amendments.

It is noted that the "concise explanation" language of the Rule is like the "concise explanation" requirement of former Rule 37 CFR 1.192, and that the length of the

concise explanation provided herein should therefore be acceptable, since it was acceptable under 37 CFR 1.192 and since it specifically defines the subject matter of the relevant claims involved in the appeal. AARON C. DEDITCH (reg. no. 33,865) has filed many appeal briefs, the concise explanation for which has almost always been accepted by the Patent Office. ***The Office is encouraged to contact the undersigned if there are any questions as to the description of the claimed subject matter.***

It is also noted that it is not necessary for the Applicants to include references cited by and relied upon by the Examiner. In the present Appeal, the Applicants have not submitted any evidence on which they intend to rely, so that the Evidence Appendix lists no evidence.

It is respectfully submitted that the final rejections of claims 9 to 18 should be reversed for the reasons explained below.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH ("Robert Bosch") of Stuttgart in the Federal Republic of Germany. Robert Bosch is the assignee of the entire right, title and interest in the present application.

2. RELATED APPEALS AND INTERFERENCES

There are no interferences or other appeals related to the present application, which "will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal".

3. STATUS OF CLAIMS

CLAIMS 1 TO 8 ARE CANCELED.

1. Claims 9 to 18 were finally rejected under 35 U.S.C. § 102(e) as anticipated by Oswald et al., U.S. Patent No. 6,907,335.

Appellants therefore appeal from the final rejections of pending and considered claims 9 to 18. A copy of all of the pending and considered and appealed claims 9 to 18 is attached hereto in the Claims Appendix (**SINCE CLAIMS 1 TO 8 ARE CANCELED**).

4. STATUS OF AMENDMENTS

A Response After A Final Office Action was mailed on November 1, 2006, and an Advisory Action was mailed on December 7, 2006.

It is understood for purposes of the appeal that any Amendments to date have already been entered by the Examiner, and that the Response After Final does not require entry since it included no amendments.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter is described as follows, and is directed to addressing the following problems and/or providing the following benefits, and as described in the context of the present application.

The presently claimed subject matter of claim 9 is directed to a device for triggering a restraining device in a vehicle, including: an arrangement for triggering the restraining device as a function of a velocity of the vehicle, the arrangement considering the vehicle velocity as a function of a signal from at least one remote sensor, in which the velocity is provided by a sensor arrangement that determines the velocity, and *in which the remote sensor is used to perform a plausibility check for the velocity of the vehicle.*

Claim 9 is to a device for triggering a restraining device in a vehicle. The present application discloses an airbag control unit that controls various restraining devices according to a trigger algorithm based on the accident type and severity. The control unit collects sensor data from sensors at remote locations (upfront sensors), and/or from side-impact sensors, which are arranged on or in the vehicle side panels. (See specification, page 3, lines 23 to 30).

Claim 9 also provides for an arrangement for triggering the restraining device as a function of a velocity of the vehicle, the arrangement considering the vehicle velocity as a function of a signal from at least one remote sensor, in which the velocity is provided by a sensor arrangement that determines the velocity. The present application discloses that the upfront sensors influence the triggering of belt tighteners and front airbags, and may include different velocity classes that may be used to modify the trigger thresholds in different ways. However, this type of increased sensitization of the trigger algorithm (a lowering of the trigger threshold as a function of the vehicle velocity, for example) is not without risk, since it may lead to an undesired triggering of the restraining device. *An additional plausibility check by the remote sensors is provided to isolate such cases* (for example, driving through a pothole or driving over a curb). (See specification, page 3, line 32 to page 4, line 18).

With the vehicle velocity, the trigger algorithm is sensitizable. *Claim 9 also provides that the remote sensor is used to perform a plausibility check for the velocity of the vehicle.*

The present application discloses that, since this would also be the case in rapid, so-called misuse driving (i.e., faulty triggering), *the vehicle velocity must be plausibilized by an additional remote sensor. This task may be assumed by one or both upfront sensor(s), for example. Here, an additional plausibility threshold to the integral of the acceleration signal from the upfront sensor may be introduced. This causes the trigger threshold to be changed only when corresponding acceleration signals are measured at the upfront sensor.* (See specification, page 4, line 20 to page 5, line 11).

Figure 1 shows the device according to a block diagram. Two upfront sensors 10 and 11 are connected to data inputs of a control unit 12 for the restraining device 15. The control unit 12 is connected to a side-impact sensor system 13 via a third data input. This side-impact sensory system may include acceleration sensors or pressure sensors as indirect deformation sensors. Via a fourth data input, control unit 12 is connected to a sensor system 14, which provides the vehicle velocity. Via a data output, control unit 12 is then connected to restraining device 15, which may include airbags, belt tighteners and roll bars, for instance. (See specification, page 5, lines 13 to 34).

With external sensor systems, control unit 12 determines whether a trigger event has occurred and whether restraining device 15 should be triggered. Using the sensor signals, including those from sensors located in control unit 12, the crash direction is determined, i.e., the crash type and severity. The vehicle velocity (from sensor system 14) will then be considered. *This vehicle velocity results in a sharpening of the trigger algorithm in that the thresholds are lowered or increased as a function of the vehicle velocity*. To avoid unnecessary sensitization of the trigger algorithm in a misuse case, and to better prevent faulty triggering, the signal of upfront sensors 10 and 11 may be considered in this change of the threshold value of the trigger algorithm. If no crash is indicated by the sensor signals, the trigger threshold will not be modified. *As to the plausibility signal of claim 9*, the present application discloses, for example, that to *generate this plausibility signal of upfront sensors 10 and 11, the signal from sensors 10 and 11 is compared to a plausibility threshold, which is lower than a trigger threshold that these signals must exceed to indicate a trigger case*. (See specification, page 6, lines 11 to 26).

In Figure 2 and in method step 20, a crash signal is generated by sensors 10, 11 and 13 and also by the sensors at control unit 12. In a method step 21, this crash signal is compared to a trigger threshold, which is dynamically changed over time. *This threshold is modified here, however, in particular as a function of the vehicle velocity from method step 22. As to the plausibility signal of claim 9*, the present application discloses, for example, that *the vehicle velocity is subjected to a plausibility check in method step 23*, using the signal from sensors 10 and 11. If the sensor signals indicate that no crash but a non-trigger event has occurred, the threshold for the threshold comparison in method step 21 is left unchanged or is even increased, and the result is evaluated in method step 24. Otherwise, no trigger event has occurred and there is a return to method step 20 to continue checking the crash signal. If so, the appropriate trigger arrangement will be triggered in method step 25. (See specification, page 6, line 28 to page 7, line 10).

Figure 3 shows the detailed sequence of the plausibility check of the vehicle velocity. In method step 30, the vehicle velocity is provided by sensor system 14. In method step 31, the processor of control unit 12 performs a classification of the vehicle velocity. In method step 33, the threshold allowance is then determined as a function of class 31. It is also considered whether it was determined in method step 32 that such a case requiring a threshold modification, i.e., a threshold increase or decrease, exists in the first place. The possibly modified threshold is provided in method step 34. (See specification, page 7, lines 12 to 19).

In a dV/timing diagram, Figure 4 shows a time characteristic of signal 44 from an upfront sensor 10, 11 in comparison with a plausibility threshold 40 and a trigger threshold 41. At instant 42 it exceeds *plausibility threshold 40*, so that it is indicated here to the algorithm that the vehicle velocity may lead to a sharpening of the algorithm and a triggering may therefore occur. In method step 43, trigger threshold 41 for the upfront sensor is then exceeded as well, which results in a sharpening of the algorithm independently of the vehicle velocity. (See specification, page 7, lines 21 to 27).

In Figure 6 and in method step 600, the vehicle velocity is ascertained. In method step 601, the threshold for the upfront algorithm is lowered as a function thereof to cause a sharpening of this algorithm. However, the result of the upfront algorithm acts on the front

algorithm in method step 602, as to its threshold, so that a sharper upfront algorithm leads to a corresponding lowering of the threshold of the frontal algorithm. The trigger decision will then be made based on a frontal algorithm influenced in this manner. *As to claim 9, this results in an implicit plausibilization of the vehicle velocity since only when the upfront algorithm detects a threshold being exceeded and thus detects an impact, will the frontal algorithm be influenced by the upfront algorithm with respect to its threshold.* As a result, misuse cases will not prompt even a sharpened upfront algorithm to a trigger decision and thus the frontal algorithm not either. (See specification, page 8, lines 4 to 15).

In summary, the presently claimed subject matter of claim 9 is directed to a device for triggering a restraining device in a vehicle, including: an arrangement for triggering the restraining device as a function of a velocity of the vehicle, the arrangement considering the vehicle velocity as a function of a signal from at least one remote sensor, in which the velocity is provided by a sensor arrangement that determines the velocity, and in which the remote sensor is used to perform a plausibility check for the velocity of the vehicle. (See claim 9).

Finally, appealed independent claim 9 includes no means-plus-function language and no step-plus-function claims, so that 37 C.F.R. 41.37(v) is satisfied as to its specific requirements for this claim, since none are present here. As to dependent claims 11, 12 and 14, these claims (which includes means-plus-function language) are not argued separately from independent claim 9, and therefore need not be identified as to their structure, as allowed for by 37 C.F.R. 41.37(v). Also, the present application does not contain any step-plus-function claims because the method claims in the present application are not "step plus function" claims because they do not recite "a step for", as required by the Federal Circuit and as stated in Section 2181 of the MPEP.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 9 to 18 are anticipated under 35 U.S.C. § 102(e) by Oswald et al., U.S. Patent No. 6,907,335.

7. ARGUMENT

A. The Rejections Under 35 U.S.C. § 102(e) That Claims 9 to 18 Are Anticipated By the "Oswald" Reference

Claims 9 to 18

Claims 9 to 18 were rejected under 35 U.S.C. § 102 (e) as anticipated by Oswald et al., U.S. Patent No. 6,907,335. It is respectfully submitted that "Oswald" does not anticipate claims 9 to 18 for the following reasons.

The presently claimed subject matter of claim 9 is directed to a device for triggering a restraining device in a vehicle, including: an arrangement for triggering the restraining device as a function of a velocity of the vehicle, the arrangement considering the vehicle velocity as a function of a signal from at least one remote sensor, in which the velocity is provided by a sensor arrangement that determines the velocity, and *in which the remote sensor is used to perform a plausibility check for the velocity of the vehicle*.

In particular, claim 9 specifically provides that *the remote sensor is used to perform a plausibility check for the velocity of the vehicle*, and that *a sensor arrangement determines the velocity of the vehicle*. In the context of the exemplary embodiment, a velocity is determined by a sensor arrangement 14, as provided for in claim 9 as presented. T*his determined velocity is then subjected to a plausibility check by another sensor – namely, the remote sensor*.

In contrast, the "Oswald" reference refers to a pre-crash sensor system, in which a velocity of an obstacle is determined. The "Oswald" reference also refers to determining the relative velocity between the vehicle and the obstacle by knowing the vehicle velocity. Importantly, while a pre-crash sensor may be a remote sensor, the pre-crash sensor is unable to detect the velocity of the vehicle, which is the platform for the pre-crash sensor.

Also, the "Oswald" reference does not identically disclose (nor even suggest) the feature of determining a plausibility check, as provided for in the context of the subject matter of claim 9.

Accordingly, the "Oswald" reference does not identically describe (or even suggest) the claim 9 feature in which *the remote sensor is used to perform a plausibility check for the velocity of the vehicle*. Claim 9 is therefore allowable, as are its dependent claims 10 to 18.

It is therefore respectfully submitted that claims 9 to 18 are allowable for at least these reasons.

As regards the law of anticipation, to anticipate a claim, each and every feature as set forth in the claim must be found in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As explained above, it is respectfully submitted that Cha does not identically disclose (or even suggest) all of the features of claim 11. Therefore, it is respectfully submitted that Cha does not anticipate claim 11.

Additionally, to reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is contained in a single prior art reference. *See, Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). Still further, not only must each of the claim features identically disclosed, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the subject matter of the rejected claims, as discussed above. *See, Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). In particular, it is respectfully submitted that, at least for the reasons discussed above, the reference relied upon would not enable a person having ordinary skill in the art to practice the subject matter of the rejected claims, as discussed above.

To the extent that the Examiner is relying on the doctrine of inherency, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the assertedly inherent characteristics necessarily flows from the teachings of the applied art." *See* M.P.E.P. § 2112; emphasis in original; and *see, Ex parte Levy*, 17

U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic.

Therefore, withdrawal of the anticipation rejection of claim 9 is respectfully requested, since claim 9 is allowable, as explained above.

Claims 10 to 18 depend from claim 9 and are therefore allowable for at least the same reasons as claim 9. Accordingly, claims 10 to 18 are allowable like claim 9.

Accordingly, it is respectfully submitted that claims 9 to 18 are allowable for the above reasons.

CONCLUSION

In view of the above, it is respectfully requested that the anticipation rejections of claims 9 to 18 be reversed, and that these claims be allowed as presented.

Respectfully submitted,

Dated: 3/19/2007

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CLAIMS APPENDIX

1-8. (Canceled).

9. (Previously Presented) A device for triggering a restraining device in a vehicle, comprising:

an arrangement for triggering the restraining device as a function of a velocity of the vehicle, the arrangement considering the vehicle velocity as a function of a signal from at least one remote sensor,

wherein the velocity is provided by a sensor arrangement that determines the velocity, and

wherein the remote sensor is used to perform a plausibility check for the velocity of the vehicle.

10. (Previously Presented) The device according to claim 9, wherein the sensor is an acceleration sensor.

11. (Previously Presented) The device according to claim 9, further comprising means for modifying at least one threshold to which at least one crash signal is compared for the triggering of the restraining device, as a function of the vehicle velocity.

12. (Previously Presented) The device according to claim 11, further comprising means for subdividing the vehicle velocity into a predefined class as a function of a magnitude of the vehicle velocity and then for modifying the threshold as a function of the class.

13. (Previously Presented) The device according to claim 9, wherein the at least one remote sensor is an upfront sensor.

14. (Previously Presented) The device according to claim 13, further comprising means for comparing the signal of the upfront sensor to a plausibility threshold, the plausibility threshold lying below a trigger threshold for generating a crash signal of the upfront sensor, the vehicle velocity being taken into consideration in the triggering of the restraining device as a function of the comparison.

15. (Previously Presented) The device according to claim 11, wherein the vehicle velocity leads to a modification of the threshold in a frontal algorithm.

16. (Previously Presented) The device according to claim 11, wherein the vehicle velocity leads to a modification of the threshold in an upfront algorithm.

17. (Previously Presented) The device according to claim 9, wherein the sensor arrangement includes a speedometer.

18. (Previously Presented) The device according to claim 9, wherein the sensor arrangement determines the velocity based on wheel speed data.

Claims Appendix 2

EVIDENCE APPENDIX

Appellants have not submitted any evidence pursuant to 37 CFR Sections 1.130, 1.131 or 1.132, and do not rely upon evidence entered by the Examiner.

Evidence Appendix 1

RELATED PROCEEDINGS INDEX

There are no interferences or other appeals related to the present application.